National Aeronautics and Space Administration (NASA)
Agency E-Government Act Implementation Update
September 14, 2007

NASA is pleased to submit our annual E-Government Act report as required by the E-Government Act of 2002 (Pub. L. No. 107-347) (Act). This report has been prepared per guidance from the Office of Management and Budget (OMB) memorandum for CIOs, "FY 2007 E-Government Act Reporting Instructions," dated August 14, 2007. NASA continues to make a priority of ensuring that the provisions of the E-Gov Act are implemented within the Agency, and has historically been a leader among Federal agencies in the application of e-government to increase the efficiency of NASA operations and to ensure that the public enjoys improved access to the Agency's on-line information resources.

Section 1 – Implementation of Electronic Government Initiatives

Section 1 of the report describes the Contract Management Module (CMM), one of NASA's electronic government initiatives. The report on CMM:

- Describes how the initiative is transforming Agency operations;
- Explains how NASA maintains an ongoing dialogue with interested parties to find innovative ways to use information technology for the initiative;
- Identifies external partners who collaborate with the Agency on the initiative;
- Identifies improved performance by tracking performance measures supporting NASA objectives and strategic goals;
- Quantifies the cost savings and cost avoidance achieved through implementing the initiative;
- Explains how this initiative ensures the availability of Government information and services for those without access to the Internet and for those with disabilities; and
- Explains how the project applies effective capital planning and investment control procedures.

Implementation of a NASA-specific E-Government Initiative

NASA's strategic intent is to pursue an integrated e-Government solution that seamlessly ties together business applications, supports government mandates such as the President's Management Agenda (PMA), and supports internal NASA initiatives such as full cost accounting. Consistent with these broader goals, NASA's procurement community is optimizing its business operations to remain at the forefront of government and industry practices. This optimization project is transforming procurement processes across the Agency. Compusearch Software Systems Inc. PRISM software was selected through a competition under GSA Schedule for the Agency-wide Contract Management Module (CMM). The software was deployed at all NASA Centers in November 2006.

The CMM provides a comprehensive contract-writing tool, integrated with NASA's SAP-based Integrated Enterprise Management (IEM) system. The CMM serves as a platform to develop and launch robust contract administration, procurement workload management, and integrated data reporting and management for NASA. In addition, the CMM provides process reengineering to facilitate, economize, and expedite procurement processes. Functional requirements for CMM focus on the following areas:

- Contract Writing System: electronic document generation and transmission system capable of seamlessly interfacing/integrating with the Agency's IEM Core Financial System.
- Data Management: (several Federal requirements for reports) provision of data to General Services Administration's (GSA) Federal Procurement Data System (FPDS) and NSF's Federal Assistance Awards Data System, along with reports to the Department of Labor (DOL) and Small Business Administration (SBA).
- Procurement Workload Management: workload tracking and data system capable of providing timely and accurate metric and status data to procurement personnel, managers, customers, and stakeholders.
- Contract Administration and Other: management of acquisitions above the bank card threshold, complex commercial item acquisitions, complex modifications, non-commercial item acquisitions, cooperative agreements, grants management, and federally required reports.

CMM complies with the Federal Acquisition Regulation (FAR), NASA FAR Supplement (NFS), the Grant and Cooperative Agreement Handbook, and related or applicable Federal and NASA policies. CMM has also been tested and verified to be Section 508 compliant. The system interfaces with electronic commerce systems, incorporating the appropriate security measures, and facilitates seamless communication between the Agency's procurement personnel and customers. CMM has resulted in less paperwork, a standardized business process, a platform for e-Gov initiatives, and an overall improvement in the way NASA does business. Further, CMM provides a foundation for continual integration and enhancement of Agency business processes, and cross-functional collaboration within NASA and across the federal procurement system. Key benefits of the CMM include:

- Providing a collaborative and efficient procurement process to better manage procurement and related financial reporting (e.g., reporting to Congress)
- Modernizing NASA procurement processes and systems with clearly defined lines of responsibility and control (i.e., consistent and accurate contract formation in accordance with FAR and NFS updates)
- Leveraging and applying expertise of trained Procurement workforce and apply best practices
- Supporting informed decision making and improve procurement data quality
- Maximizing the budget for mission expenditures by reducing life cycle costs through the utilization of procurement and project management data fields

The efficiencies gained through standardized procurement processes benefit NASA by allowing workload realignment and support through the NASA Shared Services Center (NSSC). Without the new tools provided by CMM, the diminished NASA procurement workforce will be hard-pressed to carry out important contract management duties. The estimated 10-year present value benefit to the Agency is $12.5M based on savings and cost avoidance as detailed below. An investment of $54.8M yields the following present value benefits. Specifically:

Project Present Value Benefits:	
System Savings / Cost Avoidance	est. $37.1M
Mission Savings / Cost Avoidance	est. $30.2M
Total Present Value Benefits:	**est. $67.3M**

In addition, performance measures exist and adequately reflect the linage to the appropriate mission and business functions and objectives. The measures are:

- Time required to reconcile data for external Agency reporting
- Procurement staff and procurement system users satisfied with NASA procurement systems
- Average resolution time for procurement systems help desk tickets
- Average level of system availability

With an integrated e-Gov tool, processes that directly affect contract management and procurement can be properly maintained to fulfill the stewardship responsibility incumbent upon all NASA employees. Increasing effectiveness and efficiency will inevitably reduce life cycle costs, thereby maximizing the budget available for NASA mission expenditures. In addition, better data quality (allowing for more informed investment decision-making), less risk (consistent contract structure and content), and more satisfied customers (with better procurement services) will result from this integrated process.

The CMM Project, like all new NASA IT investments meeting the "major" IT investment criteria, completes annual Exhibit 300 business case in accordance with the Agency's Capital Planning and Investment Control (CPIC) guidelines. These Exhibit 300 business cases are analyzed by the Office of the CIO for quality and conformance to policies and guidelines, and reviewed against the applicable strategic investment criteria. NASA's Investment Review Board (IRB) approves each phase of a project, indicating that the office or Center has done the preparatory work necessary to fully justify the investment and has the mechanisms in place to manage the investment through the CPIC phases. Investments such as the CMM Project must also compete for funding through NASA's budget process, and all IT investments must conform to any guidance issued by the IRB in conjunction with the Modernization Blueprints for key lines of business.

NASA maintains an ongoing dialogue both internally across Agency stakeholders and externally through the Federal PRISM Users Group (F-PUG). The F-PUG brings together interested parties from across the federal government to identify innovative ways to continually develop and use the information technology in the procurement community. NASA actively participates in the F-PUG to identify common issues with the PRISM Procurement software, to share lessons learned from similar integrations, and to target key initiatives for future system enhancement.

In conclusion, NASA has implemented the CMM as a holistic business process to leverage the stand-alone benefits of the PRISM software with the Agency-wide advantages of an enterprise management system. The integrated Contract Management Module is transforming the efficiency and effectiveness of the procurement process across NASA. In addition, the Agency has established external partners by hosting in-house workshops to foster collaboration with other Federal agencies and institutions, and participates in federal user group forums in support of E-Government initiatives. The Agency is also continually re-assessing the effectiveness of the CMM, seeking additional opportunities for business process enhancement to maximize the effectiveness of precious resources. Finally, in support of the PMA, the Contract Management Module will continue to improve by providing standard contractual documents to businesses, share information more quickly and conveniently, and automate internal processes to reduce cost.

Section 2 – Agency Information Management Activities

Section 2 of the report provides information about how NASA makes government information available on the Agency's public website, including link(s) to NASA's website where the information is located.

NASA's Information Resources Management (IRM) Strategic Plan:

Information from the NASA Information Resources Management (IRM) Strategic Plan is posted online at: http://www.nasa.gov/pdf/160990main_CIO_IRM_Strategic_Plan.pdf. Updated in September 2006, the Agency's IRM Strategic Plan is in alignment with NASA's vision, mission, and strategic goals, and serves as a communication vehicle for sharing NASA's strategy both internal and external to the Agency.

NASA's Final determinations, priorities, and schedules, including information dissemination product catalogs, directories, inventories, and any other management tools used to improve the dissemination of and access to NASA's information by the public:

NASA provides a link for the public to access our final determinations, priorities, and schedules on its main webpage (www.nasa.gov), pages accessible to the public with URL's that end in nasa.gov, and each of the NASA Center's web pages. The link is called "NASA Information-Dissemination Product Inventories, Priorities and Schedules" and takes viewers to http://www.nasa.gov/about/contact/information_inventories_schedules.html. This link has been propagated throughout most of NASA's public web pages. Members of the public can provide input into how NASA disseminates information through the Web portal by using the "comments" link on the Contact NASA page (http://www.nasa.gov/about/contact/index.html).

NASA's Office of Public Affairs determines which Government information is made available and accessible to the public through the NASA Web Portal, http://www.nasa.gov. The Office of Public Affairs releases information based on its news value and interest to the media and public. Final determination of which material will be released is based on the judgment and professional expertise of the Director of the Multimedia Division, the NASA News Chief and the Internet Services Manager. As the release of this information is timed to its news value and is highly variable in content, the Agency does not maintain a fixed schedule or list of priorities. In terms of final determinations, priorities, and schedules available for public notice and comment, the public and the news media provide feedback to the News and Multimedia Division on a daily basis via telephone and e-mail, making a formal comment period unnecessary.

NASA is committed to not only sharing information with the public, but also ensuring the quality of the information. NASA has several on-going processes for ensuring information quality, including but not limited to editorial reviews, compliance reviews, content reviews, and peer reviews. NASA has also established administrative mechanisms by which affected persons can obtain, where appropriate, timely correction of information maintained and disseminated by NASA if the information does not comply with NASA's quality standards. Information about NASA's commitment to quality of scientific and technical information, including the relevant processes can be found at http://www.sti.nasa.gov/nasaonly/qualinfo.html, "NASA Guidelines for Quality of Information."

NASA's Freedom of Information Act (FOIA) handbook, the link of NASA's primary FOIA website, and the website link where frequent requests for records are made available to the public:

- NASA's FOIA Handbook: http://www.hq.nasa.gov/office/pao/FOIA/EO_FOIA_Ref_Guide.pdf
- NASA's Primary FOIA website: http://www.hq.nasa.gov/office/pao/FOIA/agency/
- NASA's Website for Frequent Requests: *(same URL as above).* Additionally, each NASA FOIA Requester Service Center has and maintains separate electronic reading rooms, which contain records posted that have been previously released.

NASA has been proactively complying with the "Electronic Freedom of Information Act Amendments of 1996." In past years the Agency set up a specific Electronic FOIA (E-FOIA) Reading Room for posting documents relating to the Columbia accident. Currently, NASA has awarded a major contract for the development of the Crew Exploration Vehicle (CEV), which was recently posted to the Agency E-FOIA Reading Room. These and other Agency records have been electronically posted for: (1) meeting the multiple requests for similar records; or (2) the anticipation of public interest for Agency records.

It should be noted that there is a planned web site improvement that will focus on the consolidation of NASA's decentralized E-FOIA Reading Rooms. This will provide a one-stop shop for the public to find all electronically posted Agency records, which have been placed in the public reading room, in accordance with the E-FOIA Amendments of 1996 (as described in the above paragraph). NASA is also redesigning the method for indexing those documents into a subject matter + alpha order system, which will reduce the public search time to seek responsive Agency records already processed, under the FOIA. Additionally, in accordance with our published FOIA Improvement Plan, NASA is currently moving towards procuring a web-based FOIA database, which will allow the public to obtain information on and track their FOIA request on line.

A list of NASA's public websites disseminating research and development (R&D) information to the public, describing for each whether the website provides the public information about federally funded R&D activities and/or provides the results of Federal research:

One of the NASA Portal sites, http://www.nasa.gov/audience/forresearchers/features/index.html, functions as a valuable landing page for scientists, researchers, technologists, and the general public to discover how NASA partners with industry, academia, and federal / state / regional / local entities to perform breakthrough research, develop cutting edge technologies, and incorporate them into commercially viable products. From this site the public can locate information about federally funded R&D activities as well as the results of Federal research. This landing page also contains links and descriptions to many of NASA's R&D websites described in the following paragraphs. Additional Agency research opportunities and links are can be found at the site: http://www.nasa.gov/audience/forresearchers/researchbizops/index.html

NASA Technical Report Server (NTRS), http://ntrs.nasa.gov/search.jsp, is a comprehensive source of NASA's current and historical aerospace research and engineering results. NASA's R&D and missions produce a wealth of important scientific and technical information that is essential to the Agency, to U.S. aerospace companies and educational institutions, and to the Nation. The NTRS is an integral part of gathering and disseminating this mission-related information. NTRS promotes the dissemination of

NASA Scientific and Technical (STI) to the widest audience possible by allowing NTRS information be harvested by sites using the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH).

NTRS is sponsored by the NASA Scientific and Technical Information (STI) Program Office (http://www.sti.nasa.gov), which supports the acquisition, organization, management, and dissemination, and long-term retention and safeguarding of STI relevant to NASA's research and development and missions. The purpose of the STI Program is to: help ensure that NASA research is cost-effective by providing scientists and engineers with access to existing NASA and worldwide research results; support the work of the U.S. aerospace industries; and share the results of NASA's research with the world, as appropriate.

NASA's NSPIRES website (http://nspires.nasaprs.com/external/) provides the public with information about current and past federally funded research opportunities. Supporting research in science and technology is an important part of NASA's overall mission, and NASA solicits this research via the NSPIRES website (as well as on www.Grants.gov) through the release of various research announcements in a wide range of science and technology disciplines. Researchers can help NASA achieve national research objectives by submitting research proposals and conducting awarded research. This site facilitates the search for NASA research opportunities. On the NSPIRES site, the public can: search for and view open, closed, past, and future NASA research announcements; view the list of proposals selected to conduct NASA research; and search for and view results of research by NASA grantees.

Research results pertaining to the Earth Observing System (EOS) can also be located at http://eospso.gsfc.nasa.gov/eos_homepage/data_services.php. EOS is a major component of NASA's Earth-Sun System Missions. The mission includes a series of satellites, a science component, and a data system supporting a coordinated series of polar-orbiting and low inclination satellites for long-term global observations of the land surface, biosphere, solid Earth, atmosphere, and oceans. EOS is enabling an improved understanding of the Earth as an integrated system. The EOS Project Science Office (EOSPSO) is committed to bringing program information and resources to program scientists and the general public alike.

In terms of Federal research and development activities, NASA research and development (R&D) information is available through numerous external websites, including:

- https://radius.rand.org/radius/index.html
  Rand Database of Research and Development in the U.S. (RaDiUS) is a comprehensive database that tracks the annual U.S. Government investment in research and development (R&D). RaDiUS contains a broad spectrum of detail that ranges from top level information regarding the 20+ federal agencies that fund R&D down to information about the hundreds of thousands of grants, contracts, and taskings that constitute the Federal R&D enterprise.
  http://www.ntis.gov/index.asp
  National Technical Information Service (NTIS) is the largest central resource for government-funded scientific, technical, engineering, and business related information available today. NTIS provides businesses, universities, and the public timely access to well over 3 million publications covering over 350 subject areas.

An inventory describing formal Agency agreements with external entities complementing NASA's information dissemination program, briefly explaining how each agreement improves the access to and dissemination of government information to the public:

Disseminating information about its research and activities has been part of NASA's core mission since the Agency's inception. The National Aeronautics and Space Act of 1958 (as amended) directs the Agency to "provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof." These information dissemination activities occur in a wide variety of forums at NASA, from the publication of research to the NASA Portal and press releases to educational outreach.

The primary format for formal Agency agreements at NASA is the Space Act Agreement. The National Aeronautics and Space Act of 1958, also known as the "Space Act," provides our authority to enter into agreements with other U.S. government agencies, commercial entities, academic institutions and other organizations. In particular, the Space Act authorizes and encourages NASA to enter into partnerships that help fulfill our mission. As a result, the Agency engages in a wide variety of strategic partnerships, grouped broadly into cross-NASA, interagency and international collaborations of various types.

In past years, NASA has compiled lists of active agreements manually and from separate tracking systems throughout the various NASA Centers and Mission Directorates. Currently the Agency is in the process of developing the NASA Space Act Agreement Maker (SAAM) to develop common business practices in the agreement process, as well as to consolidate and centralize the management of agreements through a common web-based solution. This common best practice approach will allow for a more efficient and consistent image to our external partners, while allowing NASA to efficiently manage its Space Act Agreements.

The goal of the SAAM project is to provide a single web-based resource where information about all NASA agreements can be placed. NASA researchers, technical managers, and project/program managers will be able to initiate agreements which can then be managed by centralized coordination personnel (Agreement Managers). The SAAM project is enabling quicker turnaround and a consistent partnership process among NASA Centers, Programs and Projects. When fully implemented, it also will be used as a tool by the Agency, Mission Directorates and Centers to effectively communicate the contents of all the various agreements currently active across the Agency with reporting and data mining capabilities. Although no formal decision has been made at this time, one possibility is to make this web-based resource available to the general public.

NASA publicizes all of its major Space Act agreements that promote increased information sharing. Some specific recent examples of NASA agreements to improve the dissemination of Agency information to the general public include:

- NASA has signed innovative agreements with Yahoo! Inc. and Akamai Technologies, Inc. to help bring the Space Shuttle's return to flight mission (STS-114) to millions of Internet users through the NASA Web Portal. Yahoo! provided live streaming of NASA TV mission coverage in Windows Media format as an official online host of NASA TV footage. Akamai streamed NASA TV for RealPlayer and delivered all other Web content during the mission, building on its existing role as the content-delivery provider for the Web portal. Akamai has

agreed to expand the portal's available bandwidth by more than 30 times. Under the terms of the agreement, Yahoo! will provide a co-branded Windows Media Player that will stream the mission's official online video on the Web sites of both NASA and Yahoo!

- NASA and Internet Archive of San Francisco have partnered to scan, archive and manage the Agency's vast collection of photographs, historic film and video. The imagery will be available through the Internet and free to the public, historians, scholars, students, and researchers. Currently, NASA has more than 20 major imagery collections online. With this partnership, those collections will be made available through a single, searchable "one-stop-shop" archive. The partnership is through a non-exclusive Space Act agreement to help NASA consolidate and digitize its imagery archives at no cost to the Agency.
- NASA Ames Research Center and Google signed a Space Act Agreement that formally establishes a relationship to work together on a variety of challenging technical problems ranging from large-scale data management and massively distributed computing, to human-computer interfaces. As the first in a series of joint collaborations, Google and Ames will focus on making the most useful of NASA's information available on the Internet. Real-time weather visualization and forecasting, high-resolution 3-D maps of the moon and Mars, real-time tracking of the International Space Station and the shuttle will be explored in the future.

An inventory that describes NASA's National Archives and Records Administration (NARA)-approved records schedules(s) or the link to the publicly-posted records schedules(s), and a brief explanation of NASA's progress to implement NARA Bulletin 2006-02:

It is NASA policy to manage its information resources and records, including electronic records, in accordance with the requirements of 44 U.S.C. Chapter 31; 44 U.S.C. 3506; 36 CFR, Chapter XII, Subchapter B, Records Management; and OMB Circular A-130. In working toward the September 2009 milestone specified in NARA Bulletin 2006-02, NASA is revising retention schedules as necessary to more adequately provide for proper disposition of electronic records maintained in the Agency.

Descriptions of all of NASA's records and their retention schedules are contained in NPR 1441.1 NASA Records Retention Schedules (NRRS) posted at http://nodis3.gsfc.nasa.gov/displayDir.cfm?t=NPR&c=1441&s=1D. All schedule items are approved by the National Archives and Records Administration (NARA). Most notable among our Agency schedules are two that cover most of NASA's permanently valuable electronic records:

1. NRRS 8, Item 101 for permanent program and project records, and
2. NRRS 1, Item 22.A.1 for permanent NASA upper management records.

NASA submitted two new retention schedules for NARA approval in FY2007. In addition, NASA has undertaken a partnership effort with NARA to identify and transfer permanent electronic NASA records that are due to be transferred into the National Archives.